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4 February 2000

Ms. Ana Townsend
Site Cleanup Unit
California Regional Water Quality Control Board
Los Angeles Region
320 4th Street, Suite 200
Los Angeles, CA 90013

Subject: Quarterly Progress Report for October to December 1999
For the Jervis B. Webb Company of California Property,
5030 Firestone Boulevard, South Gate, California
(RWQCB SLIC File No. 744; EKI 961025.04)

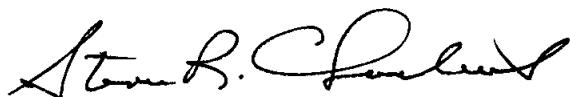
Dear Ms. Townsend:

On behalf of Jervis B. Webb Company of California ("Webb"), Erler & Kalinowski, Inc. is pleased to submit the enclosed *Quarterly Progress Report for October to December 1999*, dated 4 February 2000. This report describes the activities completed at the Webb property located at 5030 Firestone Boulevard in South Gate during the period from October through December 1999.

Please contact us if you have any comments or questions.

Very truly yours,

ERLER & KALINOWSKI, INC.



Steven R. Chambers, Ph.D.
Project Manager

cc: Mr. Michael Farley, Esq., Jervis B. Webb Company

Quarterly Progress Report for October to December 1999

Jervis B. Webb Company of California Property
5030 Firestone Boulevard
South Gate, California

4 February 2000

**Erler &
Kalinowski, Inc.**

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Jervis B. Webb Company of California Property
5030 Firestone Boulevard, South Gate, California
Quarterly Progress Report for October to December 1999

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Jervis B. Webb Company of California Property
5030 Firestone Boulevard, South Gate, California
Quarterly Progress Report for October to December 1999

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1. INTRODUCTION

Erler & Kalinowski, Inc. (“EKI”) is pleased to present this *Quarterly Progress Report for October to December 1999* for the property located at 5030 Firestone Boulevard and 9301 Rayo Avenue in South Gate, California Avenue (collectively referred to as the “Site,” see Figure 1). The principal objectives of the activities performed during this quarter were to (1) monitor the groundwater wells at the Site and (2) continue activities related to installation of a soil vapor extraction system at the Site. The work documented in this report was performed on behalf of the Jervis B. Webb Company of California (“Webb”). The property at 5030 Firestone Boulevard is owned by Webb (“Webb Property”) and the adjacent property at 9301 Rayo Avenue is owned by Reliable Steel Building Products, Inc. (“Reliable Steel”).

The quarterly groundwater monitoring activities described herein were performed in accordance with EKI’s *Project Tasks, Schedule, and Work Plan for Additional Groundwater Investigation and Quarterly Groundwater Monitoring at the Jervis B. Webb Company Property* (“Sampling Plan”), dated 29 September 1998.

2. QUARTERLY GROUNDWATER MONITORING

2.1. Measurements of Groundwater Elevation

The depth to groundwater in monitoring wells MW-1 through MW-5 was measured on 18 October and 8 December 1999 (see Figure 2 for well locations). These data are provided in Table 1. The depth to the groundwater table beneath the Site is approximately 44 ft bgs. Contours representing the elevation of the groundwater table on 18 October and 8 December 1999 are shown on Figures 3 and 4, respectively. As inferred from the contours shown on these figures, the primary direction of groundwater flow in the groundwater table aquifer beneath the Site appears to be toward the south.

2.2. Groundwater Sampling

2.2.1. Groundwater Sampling Procedures

Prior to sampling of groundwater, each well was purged of a minimum of three well-casing volumes of groundwater using a submersible, electric pump. Groundwater purging was performed by West Hazmat and groundwater samples were collected by EKI. All down-hole equipment was thoroughly steam cleaned before use at each well.

During purging of groundwater on 8 December 1999, groundwater quality parameters were recorded by EKI (temperature, pH, conductivity, and turbidity). The instruments used for monitoring groundwater quality were calibrated prior to commencement of groundwater purging. For each purge sample, the time, water quality parameters, and volume of purged groundwater were recorded on forms in the field (see Appendix A). Purging at each well was continued until groundwater quality parameters stabilized to within approximately ten percent. Groundwater quality parameters were generally stable after purging three casing volumes of water from each well. Final turbidity was generally low, between 0.52 and 4.91 nephelometric turbidity units (see Appendix A).

Groundwater samples were collected with disposable polyethylene bailers. A new bailer was used to sample each well. A sample label that included a unique sample identification number, the time, and the date when the sample was collected was attached to each sample container. Sample containers were sealed in zip-lock plastic bags and placed in a cooler with ice for temporary storage and transport to the analytical laboratory. Chain-of-Custody forms were initiated in the field and included with the samples. Laboratory reports and Chain-of-Custody forms for groundwater samples are attached in Appendix B.

2.2.2. Analytical Results for Groundwater Samples

Samples of groundwater were collected from monitoring wells MW-1 through MW-5 on 8 December 1999. In addition, a duplicate sample of groundwater was collected from well MW-5 on 8 December 1999. All samples of groundwater were submitted to Orange Coast Analytical, Inc., ("Orange Coast") in Tustin, California, for analyses of volatile organic compounds ("VOCs") using EPA Method 8260. The samples were analyzed by Orange Coast on 9 December 1999 at higher dilutions and higher method detection limits than analyses of samples collected during previous groundwater monitoring events. Orange Coast re-analyzed the samples on 17 December 1999 at lower dilutions and achieved lower method detection limits. Both sets of analytical results for the groundwater samples collected during this monitoring event are summarized in Table 2.

Trichloroethene ("TCE"), tetrachloroethene ("PCE"), cis- and trans- 1,2-dichloroethene ("c-1,2-DCE" and "t-1,2-DCE"), 1,1-dichloroethene ("1,1-DCE"), 1,1-dichloroethane ("1,1-DCA"), and benzene were detected in the samples of groundwater collected from groundwater monitoring wells MW-1 through MW-5 on 1 September 1999. The analytical results for the samples of groundwater collected during this monitoring event were similar to the results of previous groundwater monitoring at the Site, with the following exception:

- Benzene was detected in the sample of groundwater collected from monitoring well MW-4 at a concentration of 1.2 ug/l. This is the first detection of benzene in any samples of groundwater collected from the monitoring wells at the Site. However, benzene was detected in Hydropunch groundwater samples collected at the Site on 1 October 1998 (EKI, 1999a).
- T-1,2-DCE was detected in the sample of groundwater collected from monitoring well MW-4 at a concentration of 1.1 ug/l. This is the first time that t-1,2-DCE has been detected in groundwater collected from monitoring well MW-4.

2.2.3. Quality Assurance/Quality Control for Groundwater Chemical Analyses

Standard laboratory QA/QC procedures used for the project included analyses of matrix spikes, matrix spike duplicates, a quality control check spike sample, and a method blank. The percent recoveries of the matrix spike, matrix spike duplicate, and the quality control check spike sample were within acceptable ranges. No analytes were detected in the method blank samples analyzed for this project. QA/QC results are provided with the laboratory reports in Appendix B.

EKI also collected a duplicate groundwater sample from well MW-5 (see Table 2). The two samples collected from MW-5 had the same three analytes present above method detection limits. The relative percentage differences ("RPDs") for these analytes ranged from zero to eight percent. These RPDs indicate an acceptable range of sampling and analytical reproducibility.

3. SOIL REMEDIATION

3.1. Soil Vapor Extraction System Installation

During the fourth quarter of 1999, Webb contracted with Drewlow Engineering of Cardiff, California, to install and operate a soil vapor extraction ("SVE") system at the Webb Property as described in the *Work Plan for Clarifier and Removal and Soil Remediation by Soil Vapor Extraction*, by Erler & Kalinowski, Inc., dated 14 April 1999 ("Work Plan"). The RWQCB approved the Work Plan, with two modifications, in a letter dated 18 May 1999. Drewlow began installing the SVE system at the site during January 2000.

3.2. Planned Activities for Next Quarter

It is anticipated that startup of the SVE system will occur during the first week of February 2000. A discussion of progress on all activities performed at the site from January through March 2000 will be included in the next quarterly report.

4. SUMMARY

Gauging of the depth to the groundwater table was performed at the groundwater monitoring wells at the Site on 18 October and 8 December 1999. Quarterly groundwater sampling was performed at the groundwater monitoring wells at the Site on 8 December 1999. The direction of groundwater flow appears to be predominantly toward the south under both the Webb and Reliable Steel properties. This estimated direction of groundwater flow is consistent with previous groundwater monitoring at the Site.

Chemical analyses of groundwater samples collected during this monitoring event detected TCE, PCE, c-1,2-DCE, t-1,2-DCE, 1,1-DCE, 1,1-DCA, and benzene. The detected concentrations of TCE were generally higher than the concentrations of the other VOCs detected in each sample. The results of these analyses are generally consistent with prior sampling and analysis of groundwater collected at the Site. The highest concentration of TCE was detected in the sample of groundwater collected from well MW-1 (33,000 ug/l) near the building on the Webb property.

A soil vapor extraction system is currently being installed at the Webb Property. It is anticipated that operation of the system will begin in early February 2000.

5. REFERENCES

EKI, 1996: *Phase I Environmental Site Assessment of the Jervis B. Webb Properties at 9301 Rayo Avenue and 5030 Firestone Boulevard in South Gate, California*, Erler & Kalinowski, Inc., 18 February 1998.

EKI, 1998a: *Phase II Soil Investigation Report for the Jervis B. Webb Company Property at 5030 Firestone Boulevard in South Gate, California*, Erler & Kalinowski, Inc., 18 February 1998.

EKI, 1998b: *Phase II Groundwater Investigation Report at 5030 Firestone Boulevard in South Gate, California*, Erler & Kalinowski, Inc., 30 June 1998.

EKI, 1998c: *Project Tasks, Schedule, and Work Plan for Additional Groundwater Investigation and Quarterly Groundwater Monitoring at the Jervis B. Webb Company Property*, Erler & Kalinowski, Inc., dated 29 September 1998.

EKI, 1998d: *Transmittal of Results for Additional Groundwater Investigation and Proposed Well Installation at 5030 Firestone Boulevard, South Gate, California*, Erler & Kalinowski, Inc., 21 October 1998.

EKI, 1999a: *Additional Groundwater Investigation and Quarterly Monitoring Report for October to December 1998, Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, Erler & Kalinowski, Inc., 13 January 1999.

EKI, 1999b: *Work Plan for Clarifier and Removal and Soil Remediation by Soil Vapor Extraction*, Erler & Kalinowski, Inc., 14 April 1999.

EKI, 1999c: *Quarterly Progress Report for January to March 1999, Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, Erler & Kalinowski, Inc., 4 June 1999.

EKI, 1999d: *Quarterly Progress Report for April to June 1999, Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, Erler & Kalinowski, Inc., 30 July 1999.

EKI, 1999e: *Quarterly Progress Report for July to August 1999, Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California*, Erler & Kalinowski, Inc., 13 October 1999.

TABLES

TABLE 1
Groundwater Elevations in Monitoring Wells

Quarterly Progress Report for October to December 1999

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-1	2/27/98	106.09	44.79	61.30	
	3/2/98	106.09	44.82	61.27	
	3/4/98	106.09	44.58	61.51	
	4/8/98	106.09	44.57	61.52	
	5/20/98	106.09	43.99	62.10	
	10/8/98	106.09	43.38	62.71	
	11/5/98	106.09	43.14	62.95	
	12/21/98	106.09	43.37	62.72	
	1/19/99	106.09	43.26	62.83	
	2/3/99	106.09	42.98	63.11	
	3/30/99	106.09	43.22	62.87	
	6/1/99	106.09	43.48	62.61	
	7/29/99	106.09	43.82	62.27	
	9/1/99	106.09	43.76	62.33	
	9/23/99	106.09	44.03	62.06	
	10/18/99	106.09	44.43	61.66	
	12/8/99	106.09	44.55	61.54	
MW-2	2/27/98	106.65	44.02	62.63	
	3/2/98	106.65	44.06	62.59	
	3/4/98	106.65	44.13	62.52	
	4/8/98	106.65	NR	--	
	5/20/98	106.65	43.51	63.14	
	10/8/98	106.65	42.84	63.81	
	11/5/98	106.65	42.64	64.01	
	12/21/98	106.65	42.69	63.96	
	1/19/99	106.65	42.66	63.99	
	2/3/99	106.65	42.55	64.10	
	3/30/99	106.65	42.63	64.02	
	6/1/99	106.65	42.91	63.74	
	7/29/99	106.65	43.13	63.52	
	9/1/99	106.65	43.14	63.51	
	9/23/99	106.65	43.35	63.30	
	10/18/99	106.65	43.60	63.05	
	12/8/99	106.65	43.62	63.03	

TABLE 1
Groundwater Elevations in Monitoring Wells

Quarterly Progress Report for October to December 1999

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-3	2/27/98	105.87	44.55	61.32	
	3/2/98	105.87	44.56	61.31	
	3/4/98	105.87	44.40	61.47	
	4/8/98	105.87	44.39	61.48	
	5/20/98	105.87	43.80	62.07	
	10/8/98	105.87	43.26	62.61	
	11/5/98	105.87	43.60	62.27	
	12/21/98	105.87	43.33	62.54	
	1/19/99	105.87	43.18	62.69	
	2/3/99	105.87	42.97	62.90	
	3/30/99	105.87	43.19	62.68	
	6/1/99	105.87	43.58	62.29	
	7/29/99	105.87	43.85	62.02	
	9/1/99	105.87	43.90	61.97	
	9/23/99	105.87	44.10	61.77	
MW-4	10/18/99	105.87	44.37	61.50	Well Developed
	12/8/99	105.87	44.64	61.23	
	11/3/98	104.72	42.77	61.95	
	11/5/98	104.72	42.64	62.08	
	12/21/98	104.72	42.93	61.79	
	1/19/99	104.72	42.80	61.92	
	2/3/99	104.72	42.63	62.09	
	3/30/99	104.72	42.89	61.83	
	6/1/99	104.72	43.28	61.44	
	7/29/99	104.72	43.63	61.09	
	9/1/99	104.72	43.70	61.02	
	9/23/99	104.72	43.96	60.76	
	10/18/99	104.72	44.22	60.50	
	12/8/99	104.72	44.48	60.24	

TABLE 1

Groundwater Elevations in Monitoring Wells

Quarterly Progress Report for October to December 1999

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-5	11/3/98	106.13	43.32	62.81	Well Developed
	11/5/98	106.13	43.30	62.83	
	12/21/98	106.13	43.58	62.55	
	1/19/99	106.13	43.46	62.67	
	2/3/99	106.13	43.20	62.93	
	3/30/99	106.13	43.49	62.64	
	6/1/99	106.13	43.88	62.25	
	7/29/99	106.13	44.19	61.94	
	9/1/99	106.13	44.22	61.91	
	9/23/99	106.13	44.48	61.65	
	10/18/99	106.13	44.72	61.41	
	12/8/99	106.13	44.98	61.15	

NOTES: Abbreviations:

ft msl = feet above mean sea level

ft bgs = feet beneath ground surface

NR = Not Recorded

-- Not Applicable

1. Monitoring well northing and easting coordinates and top-of-casing elevations for wells MW-1, MW-2, and MW-3 were surveyed on 6 March 1998 by Rattray & Associates, Inc.
2. Monitoring well northing and easting coordinates and top-of-casing elevations for wells MW-4 and MW-5 were surveyed on 21 December 1998 by Rattray & Associates, Inc.

TABLE 2
Analytical Results for Groundwater Samples

Quarterly Progress Report for October to December 1999

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Well ID	Sample Number	Sample Date	Analyte Concentration										
			Benzene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,1-DCA (ug/L)	1,1-DCE (ug/L)	1,2-DCA (ug/L)	c-1,2-DCE (ug/L)	t-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)	TDS (mg/L)
MW-1	MW-1-0304	3/4/98	<100	<100	<100	<100	220	<100	130	<100	140	24,000	--
	MW-1-0304DUP	3/4/98	<100	<100	<100	<100	210	<100	150	<100	160	25,000	--
	MW-1-0520	5/20/98	<125	<125	<125	<125	160	<125	130	<125	<125	24,000	1,500
	MW-1	11/5/98	<125	<125	<125	<125	140	<125	160	<125	170	28,000	--
	MW-1	2/3/99	<125	<125	<125	<125	130	<125	160	<125	160	27,000	--
	MW-1	6/1/99	<100	<100	<100	<100	140	<100	190	<100	160	28,000	--
	MW-1	9/1/99	<100	<100	<100	140	220	<100	200	<100	190	32,000	--
	MW-1	12/8/99	<250	<250	<250	<250	<250	<250	<250	<250	<250	30,000	--
	MW-1-A ⁽³⁾	12/8/99	<100	<100	<100	110	150	<100	200	<100	160	33,000	--
MW-2	MW-2-0304	3/4/98	<10	<10	<10	13	34	<10	65	<10	<10	2,700	--
	MW-2-0520	5/20/98	<10	<10	<10	14	38	<10	68	<10	<10	3,000	2,500
	MW-2	11/5/98	<10	<10	<10	13	36	<10	68	<10	<10	3,200	--
	MW-2	2/3/99	<10	<10	<10	13	36	<10	70	<10	<10	3,200	--
	MW-2	6/1/99	<10	<10	<10	12	34	<10	68	<10	<10	2,800	--
	MW-2	9/1/99	<10	<10	<10	16	49	<10	72	<10	<10	3,100	--
	MW-2	12/8/99	<13	<13	<13	<13	<13	<13	57	<13	<13	2,400	--
	MW-2-A ⁽³⁾	12/8/99	<10	<10	<10	12	22	<10	63	<10	<10	2,600	--
MW-3	MW-3-0304	3/4/98	<10	13	<10	14	82	<10	200	<10	<10	2,800	--
	MW-3-0520	5/20/98	<10	<10	<10	13	58	<10	230	15	<10	2,800	1,100
	MW-3	11/5/98	<10	<10	<10	11	66	<10	240	18	<10	2,300	--
	MW-3	2/3/99	<10	<10	<10	11	64	<10	220	18	<10	2,000	--
	MW-3	6/1/99	<10	<10	<10	11	66	53	240	18	<10	1,900	--
	MW-3	9/1/99	<10	<10	<10	13	80	<10	270	20	<10	2,600	--
	MW-3	12/8/99	<13	<13	<13	<13	<13	<13	220	<13	<13	2,500	--
	MW-3-A ⁽³⁾	12/8/99	<10	<10	<10	13	55	<10	240	19	<10	2,900	--

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4 February 2000

TABLE 2

Analytical Results for Groundwater Samples

Quarterly Progress Report for October to December 1999

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Well ID	Sample Number	Sample Date	Analyte Concentration										
			Benzene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,1-DCA (ug/L)	1,1-DCE (ug/L)	1,2-DCA (ug/L)	c-1,2-DCE (ug/L)	t-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)	TDS (mg/L)
MW-4	MW-4	11/5/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	6.7	—
	MW-4	2/3/99	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5	—
	MW-4	6/1/99	<0.5	<0.5	<0.5	<0.5	<0.5	65	1.1	<0.5	<0.5	0.90	—
	MW-4	9/1/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	—
	MW-4	12/8/99	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	4.1	1.0	<0.5	17	—
	MW-4-A ⁽³⁾	12/8/99	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	4.6	1.1	<0.5	18	—
MW-5	MW-5	11/5/98	<25	<25	<25	<25	42	<25	380	30	<25	5,000	—
	MW-5-DUP	11/5/98	<25	<25	<25	<25	40	<25	360	29	<25	4,800	—
	MW-5	2/3/99	<25	<25	<25	<25	49	<25	420	35	<25	5,100	—
	MW-5-DUP	2/3/99	<25	<25	<25	<25	45	<25	370	31	<25	4,500	—
	MW-5	6/1/99	<25	<25	<25	<25	52	35	420	36	<25	5,500	—
	MW-5-DUP	6/1/99	<25	<25	<25	<25	56	39	430	35	<25	5,300	—
	MW-5	9/1/99	<25	<25	<25	<25	40	<25	420	45	<25	5,500	—
	MW-5-DUP	9/1/99	<25	<25	<25	<25	69	<25	440	45	<25	6,000	—
	MW-5	12/8/99	<50	<50	<50	<50	<50	<50	390	<50	<50	5,100	—
	MW-5-A ⁽³⁾	12/8/99	<25	<25	<25	<25	<25	<25	410	25	<25	5,300	—
	MW-5-DUP	12/8/99	<50	<50	<50	<50	<50	<50	360	<50	<50	5,000	—
	MW-5-DUP-A ⁽³⁾	12/8/99	<25	<25	<25	<25	<25	<25	410	26	<50	5,300	—

NOTES:

1,1-DCA = 1,1-dichloroethane
1,1-DCE = 1,1-dichloroethene
1,2-DCA = 1,2-dichloroethane
c-1,2-DCE = cis-1,2-dichloroethene
t-1,2-DCE = trans-1,2-dichloroethene

PCE = tetrachloroethene

mg/l = milligrams per liter

TCE = trichloroethene

ug/l = micrograms per liter

TDS = total dissolved solids

— indicates not analyzed

VOCs = volatile organic compounds

Xylenes = total Xylene isomers

1. Analyses performed by Orange Coast Analytical, Inc., in Tustin, California, using EPA Method 8260 for VOCs and EPA Method 160.1 for TDS.

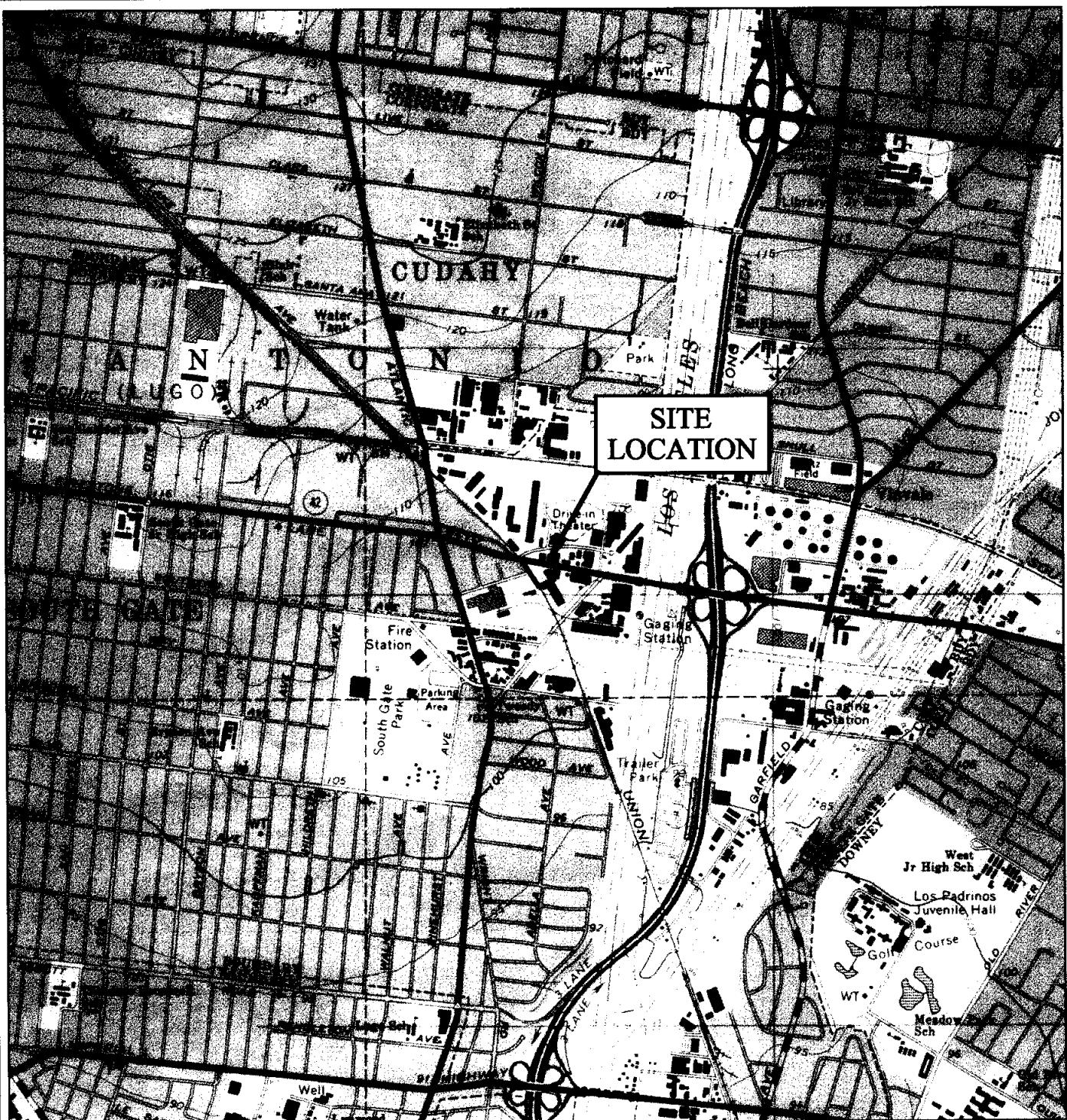
2. < indicates that the analyte was not detected at a concentration above the indicated method detection limit.

3. Samples collected on 8 December 1999 were initially analyzed on 9 December 1999 and were re-analyzed on 17 December 1999 in an attempt to achieve lower method detection limits.

Erler & Kalinowski, Inc.

4 February 2000

FIGURES



0 2,000 4,000

(Approximate Scale in Feet)

**Erler &
Kalinowski, Inc.**

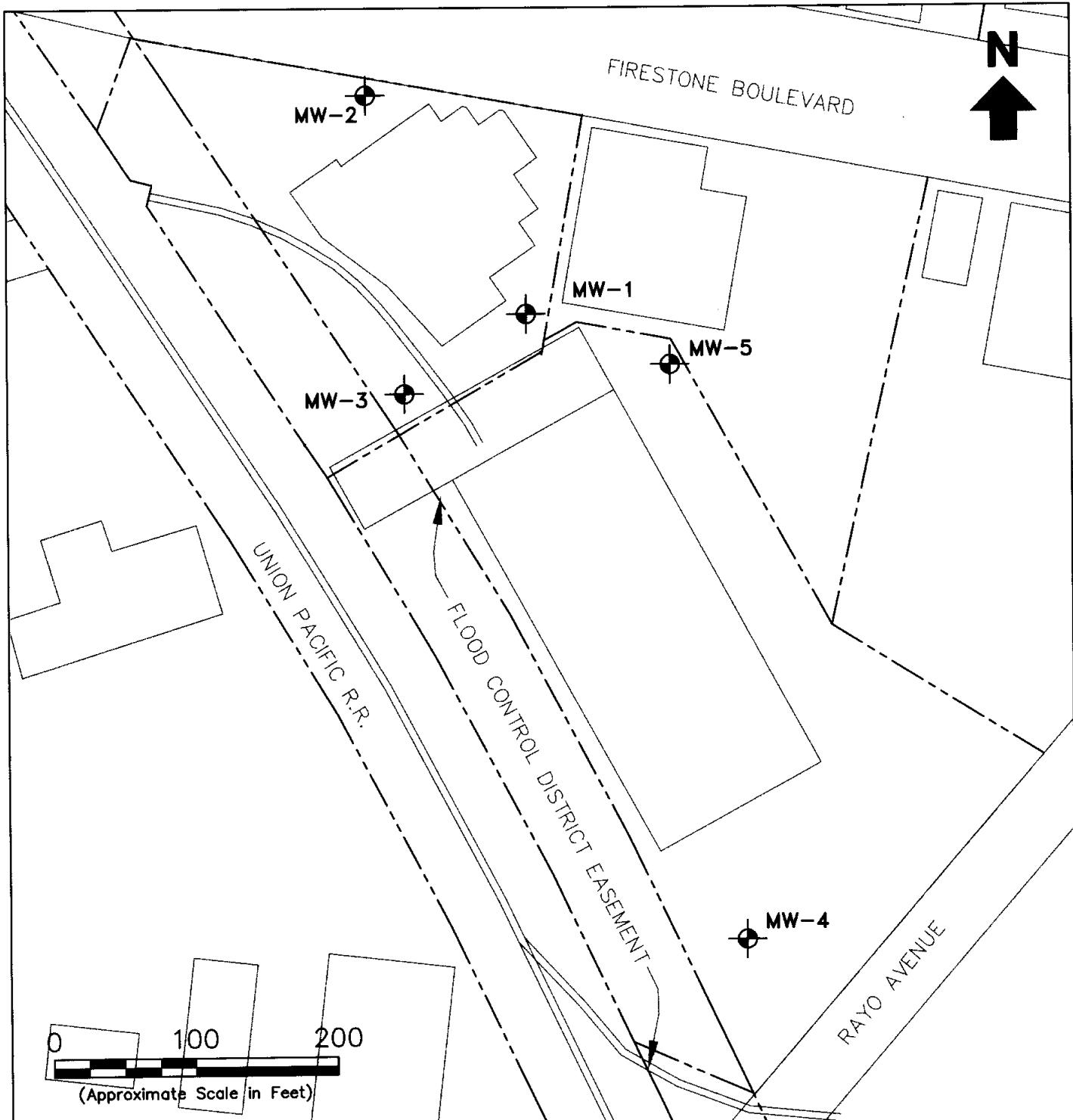
Site Location Map

Source: U.S.G.S 7.5 Minute Series "South Gate"
Quadrangle, 1964, photorevised 1981.

Jervis B. Webb Company of California
South Gate, California

February 2000
EKI 991103.01

Figure 1



LEGEND

- Groundwater Monitoring Well
- Property Line/Boundary

**Erler &
Kalinowski, Inc.**

**Groundwater Monitoring
Well Locations**

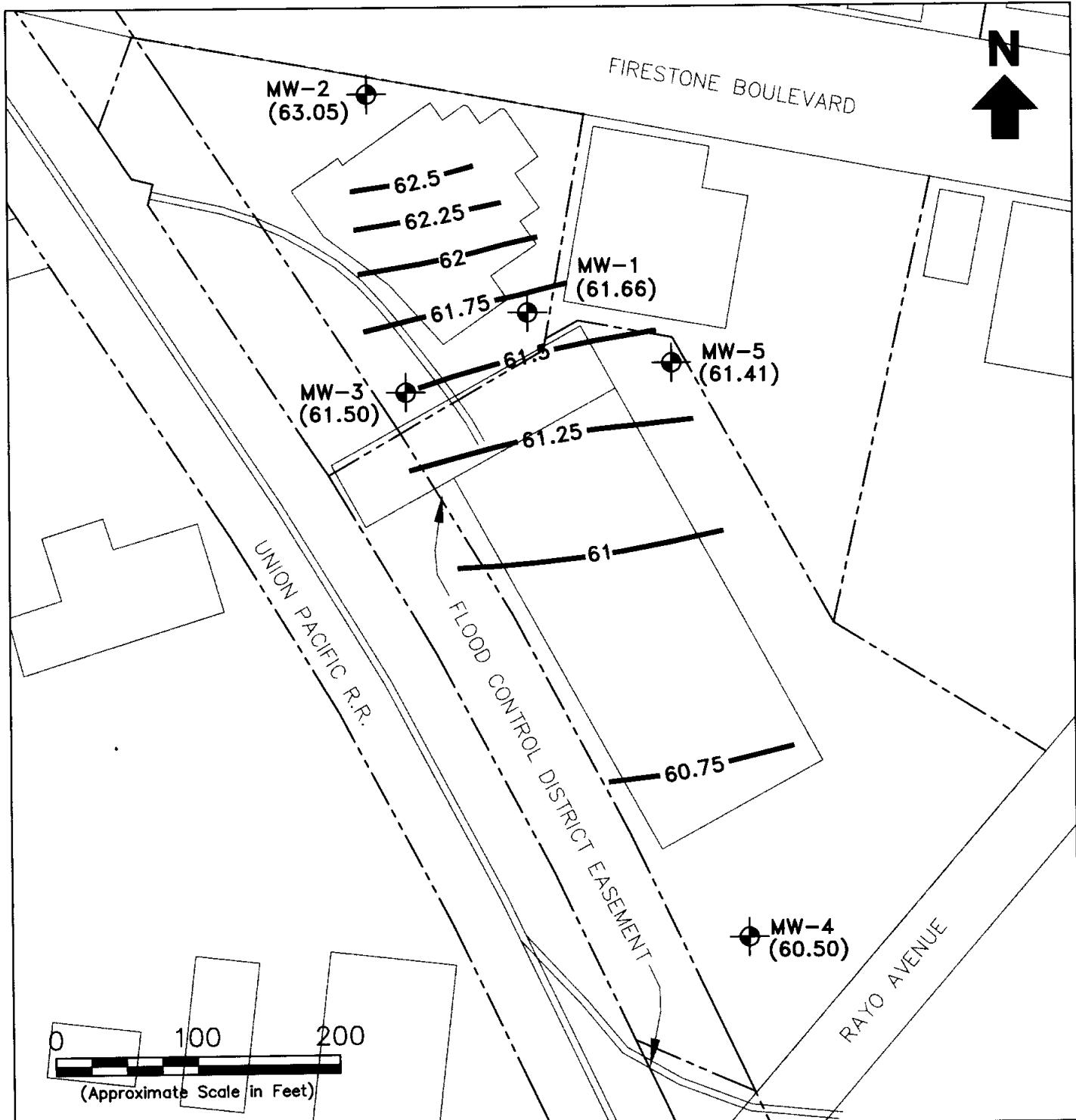
Jervis B. Webb Company of California
South Gate, California

February 2000
EKI 991103.01

Figure 2

Notes:

1. All locations are approximate.



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)
- Property Line/Boundary

Notes:

1. All locations are approximate.

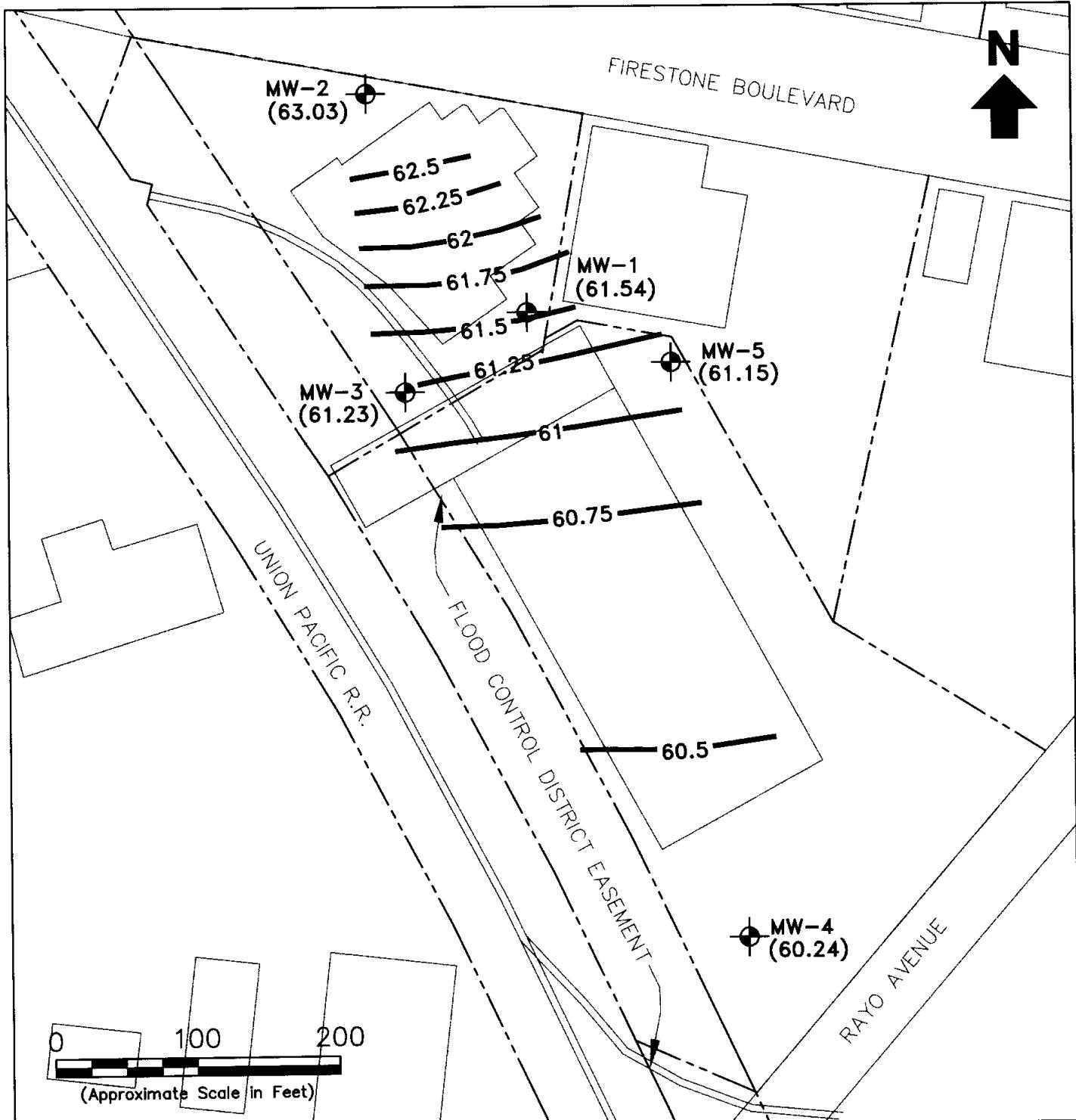
Erler & Kallnowski, Inc.

Elevation of the Groundwater Table on 18 October 1999

Jervis B. Webb Company of California
South Gate, California

February 2000
EKI 991103.01

Figure 3



LEGEND

Contour Representing the Elevation
of the Groundwater Table in Feet
Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well
with Groundwater Elevation (msl)

Property Line/Boundary

**Erler &
Kalinowski, Inc.**

Elevation of the Groundwater
Table on 8 December 1999

Jervis B. Webb Company of California
South Gate, California

February 2000
EKI 991103.01

Figure 4

Notes:

- All locations are approximate.

A

001359

APPENDIX A

Groundwater Purge and Water Quality Monitoring Forms for Groundwater Sampling

GROUNDWATER PURGE AND
WATER QUALITY MONITORING FORM

Erler &
Kalinowski, Inc.

PROJECT NAME: <u>WEBB</u>	DATE: <u>12/8/99</u>							
PROJECT NUMBER: <u>961025.02</u>	WELL NUMBER: <u>MW-1</u>	PERSONNEL: <u>BJA</u>						
WELL VOLUME CALCULATION:								
Depth of Well (ft.) <u>69.95</u>	Depth to Water (ft.) <u>44.55</u>	Water Column (ft.) <u>25.4</u>	Multiplier (below) <u>0.64</u>	Casing Vol. (gallons) <u>16.26</u>				
Mult. for casing diam. = 2-in.=0.16; 4-in.=0.64; 5-in.=1.02; 6-in.=1.44 gals/ft.								
			INSTRUMENT CALIBRATION					
No. of bailers prior to start of purge: <u>0</u>	<u>Instrument</u>	<u>Field</u>	<u>Standard</u>					
PURGE METHOD: <u>2" GRUNDFOS</u>	Conductivity	<u>measure</u>	<u>measure</u>					
PURGE DEPTH:	pH	<u>SEE MW-4</u>						
START TIME: <u>13:20</u>	Turbidity							
END TIME:	Temperature							
TOTAL GALLONS PURGED: *	Depth Probe							
Time	<u>13:25</u>	<u>13:30</u>	<u>13:35</u>	<u>13:40</u>	<u>13:43</u>	<u>13:45</u>	<u>13:48</u>	<u>13:51</u>
Volume Purged (gallons)	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>46</u>	<u>50</u>	<u>53</u>
Temperature (degrees F or C)	<u>69.3</u>	<u>68.6</u>	<u>68.2</u>	<u>68.3</u>	<u>68.7</u>	<u>68.8</u>	<u>68.3</u>	
pH (units)	<u>7.46</u>	<u>7.36</u>	<u>7.34</u>	<u>7.35</u>	<u>7.25</u>	<u>7.26</u>	<u>7.31</u>	
Specific Conductivity (uS/cm)	<u>850</u>	<u>980</u>	<u>1,380</u>	<u>1,650</u>	<u>1,760</u>	<u>1,850</u>	<u>1,880</u>	
Turbidity/Color (NTU)	<u>4.0</u>	<u>5.99</u>	<u>4.49</u>	<u>9.20</u>	<u>6.95</u>	<u>1.06</u>	<u>0.81</u>	<u>0.90</u>
Odor	<u>NONE</u>							
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed								
Purge Rate (gallons/minute)	<u>~2</u>			<u>~1</u>				
COMMENTS/ SAMPLES: <u>MW-1</u>	Field I.D. <u>13:55</u>	Time Collected	Containers & Preservation <u>2-40m VOA w/HCl</u>	Analyses Requested <u>8260</u>				

GROUNDWATER PURGE AND
WATER QUALITY MONITORING FORM

Erler &
Kalinowski, Inc.

PROJECT NAME:	Weed		DATE:	12/8/99				
PROJECT NUMBER:	161025.02	WELL NUMBER:	MW-2	PERSONNEL: BJA				
WELL VOLUME CALCULATION:								
Depth of Well (ft.)	Depth to Water (ft.)	Water Column (ft.)	Multiplier (below)	Casing Vol. (gallons)				
69.67	43.62	= 26.05	* 0.64 =	16.7 (50)				
Mult. for casing diam. = 2-in.=0.16; 4-in.=0.64; 5-in.=1.02; 6-in.=1.44 gals/ft.								
			INSTRUMENT CALIBRATION					
No. of bailers prior to start of purge:			Field measure	Standard measure				
PURGE METHOD:	2" GRUNDFOS							
PURGE DEPTH:	58'		Conductivity	SEE MW-4				
START TIME:	9:27	END TIME:	10:40	pH				
TOTAL GALLONS PURGED:	55		pH					
Time	9:41	9:46	10:00	10:14	10:18	10:40		
Volume Purged (gallons)	15	22	35	40	43	54		
Temperature (degrees F or C)	65.9		72.6	73.4	73.3	75.3		
pH (units)	7.02		7.24	7.25	7.30	7.29		
Specific Conductivity (uS/cm)	1,890		2,070	2,030	1,980	2,130		
Turbidity/Color (NTU)	78.7	40.6	86.4	47.0	23.0	4.91		
Odor	NONE							
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed								
Purge Rate (gallons/minute)	1.14		4.5					
COMMENTS/ SAMPLES:	Field I.D.: MW-2	Time Collected: 10:45	Containers & Preservation: 2-40 ml VOAs w/HCl		Analyses Requested: 8260			
STAINING w/ OIL ODOR ~20' SOUTH OF WELL.								

GROUNDWATER PURGE AND
WATER QUALITY MONITORING FORM

Erler &
Kalinowski, Inc.

PROJECT NAME: <u>WEBB</u>	DATE: <u>12/8/99</u>							
PROJECT NUMBER: <u>961025.02</u>	WELL NUMBER: <u>MW-3</u>	PERSONNEL: <u>BJA</u>						
WELL VOLUME CALCULATION:								
Depth of Well (ft.)	Depth to Water (ft.)	Water Column (ft.)	Multiplier (below)	Casing Vol. (gallons)				
<u>69.90</u>	<u>44.64</u>	<u>= 25.26</u>	<u>* 0.64</u>	<u>= 16.1</u>				
Mult. for casing diam. = 2-in.=0.16; 4-in.=0.54; 5-in.=1.02; 6-in.=1.44 gals/ft.			<u>149</u>					
			INSTRUMENT CALIBRATION					
No. of bailers prior to start of purge: <u>0</u>	Instrument	Field measure	Standard measure					
PURGE METHOD: <u>2" GRUNDFOS</u>	Conductivity							
PURGE DEPTH: <u>58'</u>	pH							
START TIME: <u>11:12</u>	pH							
END TIME: <u>11:45</u>	Turbidity							
TOTAL GALLONS PURGED: <u>50</u>	Temperature							
Time	<u>11:20</u>	<u>11:26</u>	<u>11:30</u>	<u>11:33</u>	<u>11:38</u>	<u>11:40</u>	<u>11:42</u>	<u>11:45</u>
Volume Purged (gallons)	<u>10</u>	<u>20</u>	<u>28</u>	<u>35</u>	<u>40</u>	43	45	50
Temperature (degrees F or C)	<u>66.3</u>		<u>67.6</u>	<u>68.1</u>	<u>68.1</u>	<u>68.2</u>		<u>68.3</u>
pH (units)	<u>6.83</u>		<u>7.37</u>	<u>7.49</u>	<u>7.41</u>	<u>7.43</u>		<u>7.41</u>
Specific Conductivity (uS/cm)	<u>810</u>		<u>910</u>	<u>920</u>	<u>6110</u>	<u>1,100</u>		<u>1,190</u>
Turbidity/Color (NTU)	<u>6.85</u>	<u>1.7</u>	<u>1.89</u>	<u>33.8</u>	<u>15.0</u>	<u>7.6</u>	<u>1.89</u>	<u>1.97</u>
Odor	<u>NONE</u>							
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed								
Purge Rate (gallons/minute)	<u>1.14</u>	<u>12.0</u>	<u>—</u>		<u>11.5</u>			
COMMENTS/ SAMPLES: <u>MW-3</u>	Field I.D.	Time Collected	Containers & Preservation			Analyses Requested		
		<u>11:50</u>	<u>2-40 ml VOAs w/HCl</u>			<u>8260</u>		

GROUNDWATER PURGE AND
WATER QUALITY MONITORING FORM

Erler &
Kalinowski, Inc.

PROJECT NAME:

DATE: 12/8/99

PROJECT NUMBER: 961025.02

WELL NUMBER: MW-4

PERSONNEL: GJA

WELL VOLUME CALCULATION:

Depth of Well (ft.)	Depth to Water (ft.)	Water Column (ft.)	Multiplier (below)	Casing Vol. (gallons)
69.08	44.48	= 24.6	* 0.64 =	15.7
Mult. for casing diam. = 2-in.=0.16; 4-in.=0.64; 5-in.=1.02; 6-in.=1.44 gals/ft.				

(47)

No. of bailers prior to start of purge: -

PURGE METHOD: 2" GRUNDFOS

PURGE DEPTH: 58'

START TIME: 8:30 8:23 END TIME: 9:00

TOTAL GALLONS PURGED: 50

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity	1010	1000
pH	6.69.00	7.0
pH	4.00	4.0
Turbidity	10.0	8.00
Temperature	-	10.0
Depth Probe	-	-

Time	8:30	8:34	8:38	8:43	8:49	8:55		
Volume Purged (gallons)	15	19	23	29.32	40	48		
Temperature (degrees F or C)		65.3		68.1	68.6	69.0		
pH (units)		6.87		7.01	7.03	7.04		
Specific Conductivity (uS/cm)		2,320		2,280	2,220	2,210		
Turbidity/Color (NTU)	26.5	13.5	4.69	1.99	1.50	0.87		
Odor	NO	NO	ND	NO	NO	NO		
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed							3	
Purge Rate (gallons/minute)	1.4							

COMMENTS/	Field I.D.	Time Collected	Containers & Preservation	Analyses Requested
SAMPLES:	MW-4	9:05	2 40mL w/ HCl	8260

GROUNDWATER PURGE AND
WATER QUALITY MONITORING FORM

Erler &
Kalinowski, Inc.

PROJECT NAME: <u>WEBB</u>	DATE: <u>12/88/99</u>							
PROJECT NUMBER: <u>961025.02</u>	WELL NUMBER: <u>MW-5</u>	PERSONNEL: <u>BJA</u>						
WELL VOLUME CALCULATION:								
Depth of Well (ft.)	Depth to Water (ft.)	Water Column (ft.)	Multiplier (below)	Casing Vol. (gallons)				
<u>68.89</u>	<u>44.98</u>	<u>23.91</u>	<u>0.64</u>	<u>15.3</u>				
Mult. for casing diam. = 2-in.=0.16; 4-in.=0.64; 5-in.=1.02; 6-in.=1.44 gals/ft.								
			INSTRUMENT CALIBRATION					
No. of bailers prior to start of purge: <u>0</u>	<u>Instrument</u>	<u>Field measure</u>	<u>Standard measure</u>					
PURGE METHOD: <u>2" GRUNDFOS</u>	Conductivity							
PURGE DEPTH: <u>58'</u>	pH							
START TIME: <u>12:26</u>	Turbidity							
END TIME: <u>12:51</u>	Temperature							
TOTAL GALLONS PURGED: <u>47</u>	Depth Probe							
Time	<u>12:34</u>	<u>12:38</u>	<u>12:43</u>	<u>12:46</u>	<u>12:50</u>			
Volume Purged (gallons)	<u>18</u>	<u>25</u>	<u>35</u>	<u>40</u>	<u>45</u>			
Temperature (degrees F or C)	<u>69.1</u>	<u>70.6</u>	<u>70.4</u>	<u>70.3</u>	<u>70.5</u>			
pH (units)	<u>7.27</u>	<u>7.26</u>	<u>7.25</u>	<u>7.24</u>	<u>7.22</u>			
Specific Conductivity (uS/cm)	<u>2,300</u>	<u>2,310</u>	<u>2,380</u>	<u>2,410</u>	<u>2,460</u>			
Turbidity/Color (NTU)	<u>4.98</u>	<u>2.36</u>	<u>1.60</u>	<u>0.60</u>	<u>0.52</u>			
Odor	<u>NO</u>							
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed								
Purge Rate (gallons/minute)	<u>12</u>							
COMMENTS/	Field I.D.	Time Collected	Containers & Preservation		Analyses Requested			
SAMPLES: <u>MW-5</u>		<u>12:55</u>	<u>2-40 mL VOASw/HCl</u>		<u>8260</u>			
		<u>13:00</u>	<u>"</u>		<u>"</u>			

B

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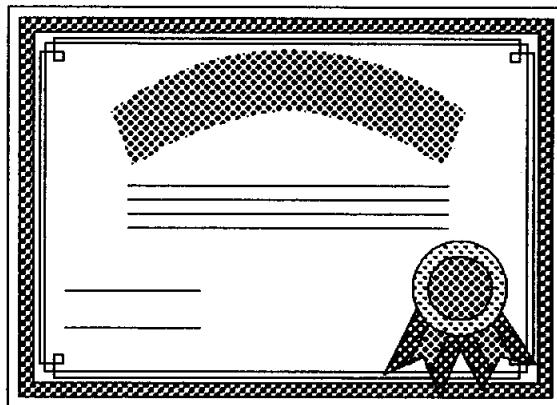
APPENDIX B

Laboratory Reports and Chain-of-Custody Forms for Groundwater Sampling



ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970



ORANGE COAST ANALYTICAL THANKS YOU FOR YOUR BUSINESS

THE FOLLOWING PAGES ARE THE ANALYSIS REPORT

ON THE SAMPLES YOU REQUESTED.

IF YOU HAVE ANY QUESTIONS REGARDING THIS REPORT

PLEASE FEEL FREE TO CONTACT US.

RECEIVED

DEC 15 1999

**ERLER & KALINOWSKI, INC.
SANTA MONICA OFFICE**

001368



ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

Laboratory Name: ORANGE COAST ANALYTICAL, INC.

Address: 3002 Dow Suite 532 Tustin, CA 92780

Telephone: (714) 832-0064

Laboratory Certification

(ELAP) No.: 1416 Expiration Date: 2001

Laboratory Director's Name (Print): Mark Noorani

Client: Erler & Kalinowski, Inc.

Project No.: 961025.02

Project Name: Webb

Laboratory Reference: EKI 11295

Analytical Method: EPA 8260

Date Sampled: 12/08/99

Date Received: 12/08/99

Date Reported: 12/09/99

Sample Matrix: Water

Chain of Custody Received: Yes

Laboratory Director's Signature: Mark Noorani



ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
 4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

ANALYTICAL TEST RESULTS 8260

Reporting Unit: ug/l

DATE ANALYZED		12/09/99	12/09/99	12/09/99	12/09/99
DILUTION FACTOR		1	1	1	1
LAB SAMPLE I.D.			99120104	99120105	99120106
CLIENT SAMPLE I.D.			MW-4	MW-2	MW-3
COMPOUND	MDL	MB			
Acetone	2.0	<2.0	<2.0	<50	<50
Benzene	0.5	<0.5	1.2	<13	<13
Bromodichloromethane	0.5	<0.5	<0.5	<13	<13
Bromoform	0.5	<0.5	<0.5	<13	<13
Bromomethane	1.0	<1.0	<1.0	<25	<25
2-Butanone	1.0	<1.0	<1.0	<25	<25
Carbon Disulfide	0.5	<0.5	<0.5	<13	<13
Carbon Tetrachloride	0.5	<0.5	<0.5	<13	<13
Chlorobenzene	0.5	<0.5	<0.5	<13	<13
Chlorodibromomethane	0.5	<0.5	<0.5	<13	<13
Chloroethane	0.5	<0.5	<0.5	<13	<13
2-Chloroethyl vinyl ether	1.0	<1.0	<1.0	<25	<25
Chloroform	0.5	<0.5	<0.5	<13	<13
Chloromethane	0.5	<0.5	<0.5	<13	<13
1,1-Dichloroethane	0.5	<0.5	<0.5	<13	<13
1,2-Dichloroethane	0.5	<0.5	<0.5	<13	<13
1,1-Dichloroethene	0.5	<0.5	<0.5	<13	<13
cis 1,2-Dichloroethene	0.5	<0.5	4.1	57	220
Trans 1,2-Dichloroethene	0.5	<0.5	1.0	<13	<13
1,2-Dichloropropane	0.5	<0.5	<0.5	<13	<13
cis-1,3-Dichloropropene	0.5	<0.5	<0.5	<13	<13
trans-1,3-Dichloropropene	0.5	<0.5	<0.5	<13	<13
Ethylbenzene	0.5	<0.5	<0.5	<13	<13
2-Hexanone	1.0	<1.0	<1.0	<25	<25
Methylene chloride	2.5	<2.5	<2.5	<63	<63
4-Methyl-2-pentanone	1.0	<1.0	<1.0	<25	<25
Styrene	0.5	<0.5	<0.5	<13	<13
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5	<13	<13
Tetrachloroethene	0.5	<0.5	<0.5	<13	<13
Toluene	0.5	<0.5	<0.5	<13	<13
1,1,1-Trichloroethane	0.5	<0.5	<0.5	<13	<13
1,1,2-Trichloroethane	0.5	<0.5	<0.5	<13	<13
Trichloroethene	0.5	<0.5	17	2,400	2,500
Trichlorofluoromethane	0.5	<0.5	<0.5	<13	<13
Vinyl acetate	1.0	<1.0	<1.0	<25	<25
Vinyl Chloride	0.5	<0.5	<0.5	<13	<13
Total Xylenes	0.5	<0.5	<0.5	<13	<13

SURROGATE	SPK	ACP%	MB			
RECOVERY	CONC		%RC			
Dibromofluoromethane	50	62-149	93	99	98	100
Toluene-d8	50	81-115	107	110	110	109
4-Bromofluorobenzene	50	74-126	107	109	109	109



ORANGE COAST ANALYTICAL, INC.

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 4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

ANALYTICAL TEST RESULTS 8260

Reporting Unit: ug/l

DATE ANALYZED		12/09/99	12/09/99	12/09/99	12/09/99
DILUTION FACTOR		1	1	1	1
LAB SAMPLE I.D.			99120107	99120108	99120109
CLIENT SAMPLE I.D.			MW-5	MW-5-DUP	MW-1
COMPOUND	MDL	MB			
Acetone	2.0	<2.0	<200	<200	<1000
Benzene	0.5	<0.5	<50	<50	<250
Bromodichloromethane	0.5	<0.5	<50	<50	<250
Bromoform	0.5	<0.5	<50	<50	<250
Bromomethane	1.0	<1.0	<100	<100	<500
2-Butanone	1.0	<1.0	<100	<100	<500
Carbon Disulfide	0.5	<0.5	<50	<50	<250
Carbon Tetrachloride	0.5	<0.5	<50	<50	<250
Chlorobenzene	0.5	<0.5	<50	<50	<250
Chlorodibromomethane	0.5	<0.5	<50	<50	<250
Chloroethane	0.5	<0.5	<50	<50	<250
2-Chloroethyl vinyl ether	1.0	<1.0	<100	<100	<500
Chloroform	0.5	<0.5	<50	<50	<250
Chloromethane	0.5	<0.5	<50	<50	<250
1,1-Dichloroethane	0.5	<0.5	<50	<50	<250
1,2-Dichloroethane	0.5	<0.5	<50	<50	<250
1,1-Dichloroethene	0.5	<0.5	<50	<50	<250
cis 1,2-Dichloroethene	0.5	<0.5	390	360	<250
Trans 1,2-Dichloroethene	0.5	<0.5	<50	<50	<250
1,2-Dichloropropane	0.5	<0.5	<50	<50	<250
cis-1,3-Dichloropropene	0.5	<0.5	<50	<50	<250
trans-1,3-Dichloropropene	0.5	<0.5	<50	<50	<250
Ethylbenzene	0.5	<0.5	<50	<50	<250
2-Hexanone	1.0	<1.0	<100	<100	<500
Methylene chloride	2.5	<2.5	<250	<250	<1250
4-Methyl-2-pentanone	1.0	<1.0	<100	<100	<500
Styrene	0.5	<0.5	<50	<50	<250
1,1,2,2-Tetrachloroethane	0.5	<0.5	<50	<50	<250
Tetrachloroethene	0.5	<0.5	<50	<50	<250
Toluene	0.5	<0.5	<50	<50	<250
1,1,1-Trichloroethane	0.5	<0.5	<50	<50	<250
1,1,2-Trichloroethane	0.5	<0.5	<50	<50	<250
Trichloroethene	0.5	<0.5	5,100	5,000	30,000
Trichlorofluoromethane	0.5	<0.5	<50	<50	<250
Vinyl acetate	1.0	<1.0	<100	<100	<500
Vinyl Chloride	0.5	<0.5	<50	<50	<250
Total Xylenes	0.5	<0.5	<50	<50	<250

SURROGATE	SPK	ACP%	MB			
RECOVERY	CONC		%RC			
Dibromofluoromethane	50	62-149	93	101	97	103
Toluene-d8	50	81-115	107	108	108	110
4-Bromofluorobenzene	50	74-126	107	109	111	110



ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

8260 QA / QC REPORT Reporting Unit : $\mu\text{g/l}$

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date Performed : 12/09/99

LAB Sample I. D. : OCA 100

cis-1,1-Dichloroethene	0.0	20	16	17	80	85	6	61-145	14
Benzene	0.0	20	20	21	100	105	5	76-127	11
Trichloroethene	0.0	20	19	21	95	105	10	71-120	14
Toluene	0.0	20	19	20	95	100	5	76-125	13
Chlorobenzene	0.0	20	19	20	95	100	5	75-130	13

R1 = Result of Laboratory Sample I.D.

SPK CONC = Spiking Concentration ($\leq 5 \times \text{PQL}$) ; PQL = Practical Quantitation Limit.

MS = Matrix Spike Result

MSD = Matrix Spike Duplicate Result

%MS = Percent Recovery of MS: $\{(MS-R1)/SP\} \times 100$.

%MSD = Percent Recovery of MSD: $\{(MSD-R1)/SP\} \times 100$.

RPD = Relative Percent Difference: $\{(MS - MSD)/(MS + MSD)\} \times 100 \times 2$

%CP%MS(MSD) = Acceptable Range of Percent.

%CP RPD = Acceptable Relative Percent Difference

Laboratory Quality Control check sample

Date Performed : 12/09/99

LAB Sample I. D. : OCA 7180-84, 7364

cis-1,2-Dichloroethene	50	50	100	80 -120
cis-1,1-Dichloropropene	50	46	92	80 -120
Chloroform	50	47	94	80 -120
Tetrachloroethene	50	50	100	80 -120
Styrene	50	48	96	80 -120

ANALYST: Greg Holmes

DATE: 12/09/99

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Analysis request and status in Study record

Lab Job No: _____
Page _____ of _____



ORANGE COAST ANALYTICAL, INC.

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Phoenix, AZ 85040
(602) 736-0960 Fax (602) 736-0970

RECOMMENDATION

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pickup samples.



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651011-02

LABORATORY REPORT FORM

Laboratory Name: ORANGE COAST ANALYTICAL, INC.

Address: 3002 Dow Suite 532 Tustin, CA 92780

Telephone: (714) 832-0064

Laboratory Certification

(ELAP) No.: 1416 Expiration Date: 2001

Laboratory Director's Name (Print): Mark Noorani

Client: Erler & Kalinowski, Inc.

Project No.: 961025.02

Project Name: Webb

Laboratory Reference: EKI 11295

Analytical Method: EPA 8260

Date Sampled: 12/08/99

Date Received: 12/08/99

Date Reported: 12/17/99

Sample Matrix: Water

Chain of Custody Received: Yes

Laboratory Director's Signature: Mark Noorani

RECEIVED

DEC 21 1999

ERLER & KALINOWSKI, INC.
SANTA MONICA OFFICE

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ANALYTICAL TEST RESULTS 8260

Reporting Unit: ug/l

DATE ANALYZED		12/17/99	12/17/99	12/17/99	12/17/99
DILUTION FACTOR		1	1	20	20
LAB SAMPLE I.D.			99120104	99120105	99120106
CLIENT SAMPLE I.D.			MW-4	MW-2	MW-3
COMPOUND	MDL	MB			
Acetone	2.0	<2.0	<2.0	<40	<40
Benzene	0.5	<0.5	1.2	<10	<10
Bromodichloromethane	0.5	<0.5	<0.5	<10	<10
Bromoform	0.5	<0.5	<0.5	<10	<10
Bromomethane	1.0	<1.0	<1.0	<20	<20
2-Butanone	1.0	<1.0	<1.0	<20	<20
Carbon Disulfide	0.5	<0.5	<0.5	<10	<10
Carbon Tetrachloride	0.5	<0.5	<0.5	<10	<10
Chlorobenzene	0.5	<0.5	<0.5	<10	<10
Chlorodibromomethane	0.5	<0.5	<0.5	<10	<10
Chloroethane	0.5	<0.5	<0.5	<10	<10
2-Chloroethyl vinyl ether	1.0	<1.0	<1.0	<20	<20
Chloroform	0.5	<0.5	<0.5	<10	<10
Chloromethane	0.5	<0.5	<0.5	<10	<10
1,1-Dichloroethane	0.5	<0.5	<0.5	12	13
1,2-Dichloroethane	0.5	<0.5	<0.5	<10	<10
1,1-Dichloroethene	0.5	<0.5	<0.5	22	55
cis 1,2-Dichloroethene	0.5	<0.5	4.6	63	240
Trans 1,2-Dichloroethene	0.5	<0.5	1.1	<10	19
1,2-Dichloropropane	0.5	<0.5	<0.5	<10	<10
cis-1,3-Dichloropropene	0.5	<0.5	<0.5	<10	<10
trans-1,3-Dichloropropene	0.5	<0.5	<0.5	<10	<10
Ethylbenzene	0.5	<0.5	<0.5	<10	<10
2-Hexanone	1.0	<1.0	<1.0	<20	<20
Methylene chloride	2.5	<2.5	<2.5	<50	<50
4-Methyl-2-pentanone	1.0	<1.0	<1.0	<20	<20
Styrene	0.5	<0.5	<0.5	<10	<10
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5	<10	<10
Tetrachloroethene	0.5	<0.5	<0.5	<10	<10
Toluene	0.5	<0.5	<0.5	<10	<10
1,1,1-Trichloroethane	0.5	<0.5	<0.5	<10	<10
1,1,2-Trichloroethane	0.5	<0.5	<0.5	<10	<10
Trichloroethene	0.5	<0.5	18	2,600	2,900
Trichlorofluoromethane	0.5	<0.5	<0.5	<10	<10
Vinyl acetate	1.0	<1.0	<1.0	<20	<20
Vinyl Chloride	0.5	<0.5	<0.5	<10	<10
Total Xylenes	0.5	<0.5	<0.5	<10	<10

SURROGATE	SPK	ACP%	MB			
RECOVERY	CONC		%RC			
Dibromofluoromethane	50	62-149	105	105	110	102
Toluene-d8	50	81-115	104	109	108	107
4-Bromofluorobenzene	50	74-126	114	118	117	116



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ANALYTICAL TEST RESULTS 8260

Reporting Unit: ug/l

DATE ANALYZED		12/17/99	12/17/99	12/17/99	12/17/99
DILUTION FACTOR		1	50	50	200
LAB SAMPLE I.D.			99120107	99120108	99120109
CLIENT SAMPLE I.D.			MW-5	MW-5-DUP	MW-1
COMPOUND	MDL	MB			
Acetone	2.0	<2.0	<100	<100	<400
Benzene	0.5	<0.5	<25	<25	<100
Bromodichloromethane	0.5	<0.5	<25	<25	<100
Bromoform	0.5	<0.5	<25	<25	<100
Bromomethane	1.0	<1.0	<50	<50	<200
2-Butanone	1.0	<1.0	<50	<50	<200
Carbon Disulfide	0.5	<0.5	<25	<25	<100
Carbon Tetrachloride	0.5	<0.5	<25	<25	<100
Chlorobenzene	0.5	<0.5	<25	<25	<100
Chlorodibromomethane	0.5	<0.5	<25	<25	<100
Chloroethane	0.5	<0.5	<25	<25	<100
2-Chloroethyl vinyl ether	1.0	<1.0	<50	<50	<200
Chloroform	0.5	<0.5	<25	<25	<100
Chloromethane	0.5	<0.5	<25	<25	<100
1,1-Dichloroethane	0.5	<0.5	<25	<25	110
1,2-Dichloroethane	0.5	<0.5	<25	<25	<100
1,1-Dichloroethene	0.5	<0.5	<25	<25	150
cis 1,2-Dichloroethene	0.5	<0.5	410	410	200
Trans 1,2-Dichloroethene	0.5	<0.5	25	26	<100
1,2-Dichloropropane	0.5	<0.5	<25	<25	<100
cis-1,3-Dichloropropene	0.5	<0.5	<25	<25	<100
trans-1,3-Dichloropropene	0.5	<0.5	<25	<25	<100
Ethylbenzene	0.5	<0.5	<25	<25	<100
2-Hexanone	1.0	<1.0	<50	<50	<200
Methylene chloride	2.5	<2.5	<125	<125	<500
4-Methyl-2-pentanone	1.0	<1.0	<50	<50	<200
Styrene	0.5	<0.5	<25	<25	<100
1,1,2,2-Tetrachloroethane	0.5	<0.5	<25	<25	<100
Tetrachloroethene	0.5	<0.5	<25	<25	160
Toluene	0.5	<0.5	<25	<25	<100
1,1,1-Trichloroethane	0.5	<0.5	<25	<25	<100
1,1,2-Trichloroethane	0.5	<0.5	<25	<25	<100
Trichloroethene	0.5	<0.5	5,300	5,300	33,000
Trichlorofluoromethane	0.5	<0.5	<25	<25	<100
Vinyl acetate	1.0	<1.0	<50	<50	<200
Vinyl Chloride	0.5	<0.5	<25	<25	<100
Total Xylenes	0.5	<0.5	<25	<25	<100

SURROGATE	SPK	ACP%	MB			
RECOVERY	CONC		%RC			
Dibromofluoromethane	50	62-149	105	108	110	112
Toluene-d8	50	81-115	104	108	107	110
4-Bromofluorobenzene	50	74-126	114	116	115	120



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8260 QA / QC REPORT Reporting Unit : $\mu\text{g/l}$

. Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date Performed : 12/17/99

LAB Sample I. D. : OCA 100

	0.0	20	16	17	80	85	6	61-145	14
1,1-Dichloroethene	0.0	20	16	17	80	85	6	61-145	14
Benzene	0.0	20	20	20	100	100	0	76-127	11
Trichloroethene	0.0	20	22	21	110	105	5	71-120	14
Toluene	0.0	20	19	18	95	90	5	76-125	13
Chlorobenzene	0.0	20	19	18	95	90	5	75-130	13

R1 = Result of Laboratory Sample I.D.

SPK CONC = Spiking Concentration ($\leq 5 \times \text{PQL}$) ; PQL = Practical Quantitation Limit.

MS = Matrix Spike Result

MSD = Matrix Spike Duplicate Result

%MS = Percent Recovery of MS: $\{(MS-R1)/SP\} \times 100$.

%MSD = Percent Recovery of MSD: $\{(MSD-R1)/SP\} \times 100$.

RPD = Relative Percent Difference: $\{(MS - MSD)/(MS + MSD)\} \times 100 \times 2$

%CP%MS(MSD) = Acceptable Range of Percent.

%CP RPD = Acceptable Relative Percent Difference

? . Laboratory Quality Control check sample

Date Performed : 12/17/99

LAB Sample I. D. : OCA 7180-84, 7364

cis-1,2-Dichloroethene	50	57	114	80 -120
1,1-Dichloropropene	50	51	102	80 -120
Chloroform	50	57	114	80 -120
Tetrachloroethene	50	48	96	80 -120
Styrene	50	49	98	80 -120

ANALYST: Greg Holmes

DATE: 12/17/99

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